CETON corporation

April 8, 2010

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Comments regarding the National Broadband Plan
GN Docket No. 09-51, Section 4.2 Devices and CS Docket No. 97-80

Dear Ms. Dortch:

Recently, there has been a great deal of discussion in the public forums about the virtues of CableCARD and the impact the implementation of CableCARD has had on consumer markets. Ceton Corporation has developed new technology which brings cable TV to the PC and has several new consumer products coming to market during 2010 which utilize CableCARD as the interface to cable TV providers. These new Ceton products with the PC, will help to integrate traditional broadcast TV and IP based video from the Internet on the consumer's living room HDTVs, and as such these products are very consistent with the National Broadband Plan put forth by the FCC in March 2010. Ceton is an independent company, with no affiliation to any cable TV provider or hardware manufacturer. Ceton has recently completed the development, testing, and submission process for CableLabs' certification and is uniquely qualified as one of a very few companies to have been through this process.

Background: Ceton Corp. is a new startup company which has been working on CableCARD products for more than three years. The desired functionality of these products required Ceton to develop new hardware in the form of a proprietary silicon chip, and new software to interface with CableCARD, and handle the Conditional Access and Digital Rights Management required by the OpenCable specifications from CableLabs. Ceton's developed technology includes the ability to deliver six High Definition channels to end user devices from a single CableCARD and more channels from multiple CableCARDs. The CableCARD interface for PCs, as defined by CableLabs Digital Receiver Interface (DRI), has been included as a part of Microsoft's recent release of Windows 7 and Microsoft has invested considerable resources to include the DRI in Windows 7. Ceton worked with Microsoft during the development and testing phase of the Windows 7 DRI implementation, and Ceton CableCARD products with Windows 7 have been beta tested in more than 25 different states from all major and many minor cable TV providers as well as Verizon FIOS.

The Development Process: During the past three years, Ceton has experienced every aspect necessary for the development of a new CableCARD product, from the initial project scope, hardware design, software development, and prototype fabrication, to beta testing, manufacturing, and CableLabs' certification. Also during these three years, Ceton has had considerable interface with CableLabs and many cable TV providers. Ceton's experiences can offer insight into the process required for development of a new CableCARD product.

CableLabs: During the past three years Ceton has been involved with CableLabs on many different levels including general specification review, use of CableLabs' laboratories for testing prototypes in preparation for certification, participating on specification drafting committees, and presenting technology at the CableLabs Summer Conference. On every occasion Ceton has found CableLabs to be exceptionally professional, helpful, supportive, and accommodating. CableLabs goes to extremes to be impartial and Ceton has always felt on an equal footing with larger more established hardware manufacturers with regards to access to information, test procedures and equipment, and resolution of specification questions and issues. CableLabs' policies and procedures for changes to specifications are well established and fair; balancing manufacturer and consumer interests with cable provider network operational and security constraints. CableCARD products are complex and the certification process is comprehensive to ensure that new products work well on cable provider networks with the goal of producing satisfied consumers. Certification and associated costs are substantial, probably about $200,000 for the first product development cycle.

MSOs: Ceton's offices are in the Seattle, WA area with Comcast as its cable TV provider. Much of Ceton's development work has been accomplished from a live Comcast feed and Ceton has had multiple instances of involvement with our local Comcast offices and also corporate offices in Philadelphia. On every occasion, Comcast personnel have gone out of their way to be helpful and supportive, from setting up test accounts, to getting us CableCARDs (which we lease), to helping us diagnose problems with interface to the head end systems. Ceton has also had considerable interface with other MSOs including Time Warner Cable, Cox Communications, Bright House Networks, Rogers Communications, Insight Communications and others. Again in all cases Ceton has found these organizations to be extremely professional and supportive working to resolve issues and problems.

CableCARD: The CableCARD product interface, with the associated Conditional Access (CA) and Digital Rights Management (DRM), is technologically complex. New product development cycles can be lengthy and also costly, but probably on a par with other major new consumer electronic device developments. Although the initial versions of Single Stream CableCARD were not well supported and sometimes unreliable, the current iteration of Multi-Stream CableCARD is very reliable and works well. Support for CableCARD in third party devices varies widely from MSO to MSO and in different geographical regions. Comcast in Seattle has become very proficient in pairing CableCARDs in third party devices while in other parts of the country the experience can be less satisfying and in some places, with some MSOs, the process can be somewhat painful. Instances have occurred where MSO support personnel have stated their company does not support CableCARDs in third party devices, MSOs don't have CableCARDs, or MSO personnel have tried to talk customers out of using CableCARDs in a third party device in favor of the MSO's leased Set-Top Box.

Although the CableCARD solution is technically complex and can be difficult to implement, the security and DRM problems which CableCARD addresses and solves are equally difficult. It is unlikely another CA/security/DRM solution would be "simple" and significantly less difficult to implement.

National Broadband Plan: Ceton has reviewed the FCC's new National Broadband Plan and is in agreement with the overall scope and direction the Plan presents. Ceton offers the following comments on section 4.2 Devices and the FCC recommendations included in this section.

- **Recommendation 4.12: The FCC should initiate a proceeding to ensure that all multichannel video programming distributors (MV PDs) install a gateway device or equivalent functionality in all new subscriber homes and in all homes requiring replacement set-top boxes, starting on or before Dec. 31, 2012.**

Ceton agrees the residential gateway concept could simplify development of end user TV devices and allow for a standardized TV viewing (thin client) device usable with multiple MVPD networks. The challenges of the gateway device will be to get all MVPDs to agree on a set of standards to support end user devices and making the complexities of Conditional Access and Digital Rights Management simple yet secure.

- **Recommendation 4.13: On an expedited basis, the FCC should adopt rules for cable operators to fix certain Cable-CARD issues while development of the gateway device functionality progresses. Adoption of these rules should be completed in the fall of 2010.**

This recommendation is of paramount importance for the success of CableCARD to open up the cable TV device market for competition to manufacturers other than Cisco and Motorola. Currently, CableCARDs are paired with MSO STB devices prior to being deployed in customers' homes while third party devices must have CableCARDs paired by a live technician or by the customer over the phone. Technicians are often not sufficiently trained on pairing CableCARDs in third party devices so this process is sometimes difficult or unsuccessful. Ceton proposes a system where the CableCARD could be paired over the Internet. Both MSO STBs and third party devices have access to all required data from the CableCARD and this information could be transmitted directly to the MSO for device pairing over IP. This eliminates intervention by a live technician, could be implemented the same for MSO STBs as well as third party devices, and would reduce technician costs for MSOs.

MSO STB lease pricing should be transparent and separate from video content pricing to help customers understand the economics of leasing equipment from the MSO versus buying at retail.

The certification process can be streamlined and cost reduced, but the challenge is to not relax technical requirements otherwise consumers might suffer with products which do not operate properly, and MSO support networks might be overburdened with complaints.

Although the FCC, in partnership with industry, developed the CableCARD standard in 1998, the FCC did not require the cable industry to use CableCARDs until July, 2007, less than three years ago. Thus, prior to July, 2007, all STBs deployed on MSO networks continued to use proprietary security which was closed to third parties, and CableCARDs were not sufficiently supported by MSOs in order for many third parties to successfully develop new CableCARD devices. Additionally, CableCARDs did not have the desired multi-channel capability and generally lacked reliability until the current Multi-Stream CableCARD became widely available for third party devices some months after July, 2007. This has contributed greatly to the current lack of competition and new devices which have come to market. The lead time required for development of new devices is

several years. It has been suggested by some that now CableCARD should be abandoned in favor of a new system. It seems prudent to point out that it has been scarcely more than two years since the now reliable, well supported, Multi-Stream CableCARD has been widely available. Another change in direction at this point might introduce additional chaos into product development cycles and any new system would likely require many more years for market adoption. In essence, with the many years already invested in the CableCARD system, which finally now works well, give it time to become successful. Ceton believes that after years of development and refinement, the current CableCARD system has now become well enough established to be able to fulfill the FCC's goal of opening up the Set-Top Box device market to innovative new TV solutions. In order to solidify this goal, FCC Recommendation 4.13, rules for cable operators to fix certain CableCARD issues allowing third party devices to operate on an equal footing with MSO STBs, is of paramount importance and should be swiftly implemented.

Additionally, support for the CableCARD system should be reaffirmed so hardware device manufacturers have a clear direction for the development of new products and solutions. Only with equal footing in the marketplace and clear direction, can the desired new innovative products be developed and brought to market.

Respectfully submitted,

/s/ Gary Hammer

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